



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

NOV 04 2010

REPLY TO THE ATTENTION OF:

AE-17J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Joseph A. Miller, Jr., General Manager
Duke Energy Corporation
W.H. Zimmer Generating Station
1781 U.S. Route 52
Moscow, Ohio 45153-9705

Dear Mr. Miller:

This is to advise you that the U. S. Environmental Protection Agency has determined that Duke Energy Corporation (Duke Energy), owner and operator of the William H. Zimmer Generating Station in Moscow, Ohio, is in violation of the Clean Air Act (CAA).

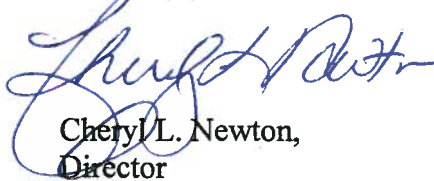
EPA is sending this Notice of Violation and Finding of Violation (NOV/FOV) to notify you that Duke Energy has violated the following CAA provisions: the Ohio State Implementation Plan; Prevention of Significant Deterioration; New Source Performance Standards; and Title V.

Section 113 of the CAA gives us several enforcement options to resolve these violations, including: issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action. The option we select, in part, depends on the efforts taken by Duke Energy and its co-owners to correct the alleged violations and the timeframe in which you can demonstrate and maintain continuous compliance with the requirements cited in the NOV/FOV.

Before we determine which enforcement option is appropriate, we are offering you the opportunity to request a conference with us about the violations alleged in the NOV/FOV. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for your facility's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

If you wish to request a conference, please contact Ethan Chatfield of my staff at 312-886-5112. EPA hopes that this NOV/FOV will encourage Duke Energy to achieve and maintain compliance with the requirements of the CAA.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Cheryl L. Newton", is written over the typed name.

Cheryl L. Newton,
Director
Air and Radiation Division

Enclosure

cc: Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency

Brad Miller, Supervisor
Permits and Enforcement Section
Hamilton County Department of Environmental Service

**United States Environmental Protection Agency
Region 5**

IN THE MATTER OF:

Duke Energy Corporation

William H. Zimmer Generating Station

Moscow, Ohio

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)
)
) **Proceedings Pursuant to**
) **Section 113(a)(1) and (a)(3) of the**
) **Clean Air Act,**
) **42 U.S.C. §7413(a)(1) and (a)(3)**

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) **EPA-5-11-OH-03**
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)
)

NOTICE OF VIOLATION AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation and Finding of Violation (Notice) under Section 113(a) of the Clean Air Act, 42 U.S.C. § 7413(a). The authority to issue this NOV/FOV has been delegated to the Regional Administrator of the U.S. Environmental Protection Agency, Region 5, and redelegated to the Director, Air and Radiation Division.

EPA finds that Duke Energy Corporation (Duke Energy) is violating the Clean Air Act (Act), 42 U.S.C. §§ 7401 -7671q., at its William H. Zimmer Generating Station (Zimmer Station) located in Moscow, Ohio.

STATUTORY AND REGULATORY BACKGROUND

1. The Clean Air Act is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

Prevention of Significant Deterioration Requirements

2. On June 19, 1978, EPA promulgated regulations pursuant to Part C of Title I of the Act. 43 *Fed. Reg.* 26403 (June 19, 1978).

3. The Prevention of Significant Deterioration (PSD) provisions of Part C of Title I of the Act require preconstruction review and permitting of stationary sources in attainment/unclassifiable areas. *See* 42 U.S.C. §§ 7470-7492. Pursuant to applicable regulations, if a major stationary source located in an attainment area is planning to make a major modification, then that source must obtain a PSD permit before beginning actual construction. *See* 40 C.F.R. § 52.21(i). To obtain this permit, the source must, among other things, undergo a technology review and apply Best Available Control Technology (BACT); perform a source impact analysis; perform an air quality analysis and modeling; submit appropriate information; and conduct additional impact analyses as required.

4. On August 7, 1980, EPA incorporated by reference the provisions of 40 C.F.R. § 52.21(b) through (w) into the Ohio SIP, 45 *Fed. Reg.* 52741, and codified at 40 C.F.R. § 52.1884. On January 29, 1981, EPA delegated to the Ohio Environmental Protection Agency (OEPA) the authority to review and process PSD permit applications, and to implement the federal PSD program. 46 *Fed. Reg.* 9580 (effective May 1, 1980). On October 10, 2001, EPA conditionally approved Ohio's PSD SIP provisions. 66 *Fed. Reg.* 51570. On February 25, 2010, EPA approved Ohio's NSR Reform SIP provisions. 75 *Fed. Reg.* 8496. The Ohio PSD provisions are codified at Ohio Administrative Code 3745-31-11 to 3745-31-20.

5. 40 C.F.R. 52.21(r)(1) states that "Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this section or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this section who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action."

6. Under OAC Rule 3745-31 of the Ohio SIP, on February 5, 1987 (modified April 1, 1992), the Ohio Environmental Protection Agency (OEPA) issued Permit to Install (PTI) 14-1036 for an "Electric Power Generation Facility w/1,300 MW Coal-fired Boiler w/ESP and FGD and 2 Auxiliary Boilers and Associated Material Handling." The PTI contained the following provisions:

- i) "The proposed source shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law."
- ii) Source Identification: 11,968 mmBtu/hr coal fired boiler, Zimmer Unit 1
- iii) Opacity emission limitation for Unit B006 (page 4): Opacity emissions shall not exceed 20 percent as a six-minute average, except for one six-minute period per hour of not more than 27 percent.
- iv) Opacity emissions limitation for Units B007 and B008 (page 5): Opacity emissions shall not exceed 20 percent as a six-minute average.
- v) SO₂ BACT limitation for Unit B006 (page 9): "A short-term BACT SO₂ emission limit of 1.0 lb/mmBtu, 3 -hour average, shall be applicable to B006..."

Ohio State Implementation Plan (SIP) - Opacity

7. U.S. EPA approved OAC Chapter 3745-17-07(A)(1) as part of the federally enforceable Ohio SIP on June 27, 1994. 59 *Fed. Reg.* 27464

8. OAC 3745-17-07(A)(1)(a) of the Ohio SIP requires that visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average. The visible particulate emissions from any stack may exceed 20% opacity, as a six-minute average, for not more than six consecutive minutes in any sixty minutes, but shall not exceed 60% opacity, as a six-minute average, at any time. June 27, 1994 (*See 59 Fed. Reg. 27464*).

New Source Performance Standards (NSPS): Subpart Da and Db

9. 40 C.F.R. Part 60.11(d) of the general provisions of the NSPS states that, “[a]t all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.”

10. 40 C.F.R. Part 60.43b(f) of Subpart Db states that, “no owner or operator of an affected facility that can combust coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.”

11. 40 C.F.R. Part 60.42a(b) of Subpart Da states that “no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.”

Title V Requirements

12. U.S. EPA promulgated full approval of the Ohio’s Title V program on August 15, 1995. *See* 40 C.F.R. Part 70, Appendix A; 60 *Fed. Reg.* 42045. Ohio’s Title V program became effective on October 1, 1995. *See* 60 *Fed. Reg.* 42045.

13. The Ohio regulations governing the Title V permitting program are codified at OAC 3745-77, and are federally enforceable pursuant to Section 113(a)(3).

14. On November 18, 2004, OEPA issued a Final Title V Permit (No. 14-13-09-0154) to Cincinnati Gas & Electric Co., the former owner and operator of the Zimmer Station in accordance with OAC 3745-77 of the Ohio SIP. The Title V permit contained the following provisions:

- i. Deviation Reporting, Part I, Condition A.1.c.ii (page 2): “[w]ritten reports of any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, the probable cause of such deviations, and any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency.”

- ii. Unit 1 (B006) Part III, Condition A.I.2.c (page 30): visible particulate emissions shall not exceed 20 percent opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity.
- iii. Unit 1 (B006) Part III, Condition A.I.1 (page 29): applicable emission limitation for visible particulate is 20 percent opacity as a 6-minute average except for one 6-minute period per hour of not more than 27 percent opacity.
- iv. Unit 1 (B006) Part III, Condition A.I.2.b (page 30): sulfur dioxide emissions shall not exceed 1.0 lb/mmbtu, as a 3-hour average.
- v. Auxiliary Boilers A and B, (B007 and B008) Part III, Condition A.I.1 and 2b (pages 42 and 51): visible particulate emissions shall not exceed 20% opacity as a 6-minute average.

FACTUAL BACKGROUND

- 15. Duke Energy is incorporated in Delaware.
- 16. Duke Energy is a “person,” as that term is defined in Section 302(e) of the Act, U.S.C. § 7602(e). 42
- 17. From 1978 to June 15, 2004, the Zimmer Station was located in an area classified as nonattainment for the one-hour ozone standard. *See 69 Fed. Reg.* 23858 (April 30, 2004).
- 18. From June 15, 2004, to May 11, 2010, the Zimmer Station was located in an area classified as nonattainment for the eight-hr ozone standard. *See 69 Fed. Reg.* 23858 (April 30, 2004) and *75 Fed. Reg.* 26118 (May 11, 2010).
- 19. From April 5, 2005 to the present, the Zimmer Station was located in an area classified as nonattainment for fine particulates (PM_{2.5}). *See 70 Fed. Reg.* 944 (January 5, 2005).
- 20. At all other times relevant to this NOV/FOV, the Zimmer Station was located in an area which was in attainment for all other regulated pollutants.
- 21. In Appendix B of its March 1986 PSD permit application to Ohio Environmental Protection Agency, the co-owners of the proposed Zimmer Station stated the “input capacity” of the main boiler as an “11,968 mmBtu/hr” using 3.7×10^6 tons of coal per year.
- 22. The BACT and air quality analyses conducted by Ohio EPA were based on the company’s stated maximum heat input capacity of 11,968 mmBtu/hr and 3.7×10^6 tons of coal per year.
- 23. In 1992, the Zimmer station reported to the Department of Energy that the plant combusted 4,126,051 tons of coal per year and have repeatedly since that time burned greater than 3,700,000 tons of coal per year.

24. The Zimmer Station Title V permit describes Boiler B006 as a “pulverized coal-fired, dry bottom boiler, having a nominal heat input capacity of 11,968 mmBtu/hr.” (page 29)

25. Based on review of continuous emission monitoring (CEM) data submitted to EPA, we have determined that during the period from 4th Quarter 2007 to 2nd Quarter 2010 Unit B006 exceeded the 11,968 mmBtu/hr heat input limitation stated on page 3 of PTI 14-1036 and in the original PSD permit application a total of 5,519 hours (25% of the total operating hours). The number of minutes these units were in exceedance of the limit, per quarter, is provided in Table 1, below.

Table 1: Hours in violation of mmBtu per hour limitation for Boiler B006:

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2007				630
2008	944	609	623	260
2009	426	76	349	550
2010	443	249		

26. Based upon review of Quarterly Excess Emission Reports submitted by Duke Energy for the Zimmer Station for 4th Quarter 2007 to 2nd Quarter 2010, the facility was in exceedance of its opacity limit of 20 percent, 6-minute average opacity for a total of 3,384 minutes for B006, 564 minutes for B007, and 1,146 minutes for B008. The number of minutes these units were in exceedance of the applicable opacity limit, per quarter, is provided in Table 2, below.

Table 2: Opacity Violations for Boiler B006, B007, and B008:

Quarter	B006	B007	B008
2007: 4 th Quarter	126	96	348
2008: 1 st Quarter	36	138	162
2 nd Quarter	708	36	120
3 rd Quarter	690	30	198
4 th Quarter	198	6	102
2009: 1 st Quarter	72	18	42
2 nd Quarter	24	0	54
3 rd Quarter	180	24	0
4 th Quarter	0	114	48
2010: 1 st Quarter	12	6	12
2 nd Quarter	1,338	96	60

27. On August 19, 2008, from 12:10 PM to 3:15 PM, EPA took visible emission readings of the stack for Boiler B006 at the Zimmer station and observed opacity in excess of the 20% limit for a total of 48 minutes.

28. On September 22, 2008, from 10:05 AM to 10:35 AM and 11:00 AM to 11:30 AM, Hamilton County Department of Environmental Services took visible emission readings of the stack for Boiler B006 at the Zimmer Station and observed opacity in excess of the 20%

limit for a total of 36 minutes.

29. On October 20, 2008, from 10:55 AM to 11:25 AM, Hamilton County Department of Environmental Services took visible emission readings of the stack for Boiler B006 at the Zimmer Station and observed opacity in excess of the 20% limit for a total of 30 minutes.

30. On November 17, 2009, from 10:00 AM to 10:30 AM, Hamilton County Department of Environmental Services took visible emission readings of the stack for Boiler B006 at the Zimmer Station and observed opacity in excess of the 20% limit for a total of 24 minutes.

31. During the period from 4th Quarter 2007 to 2nd Quarter 2010, Unit B006 exceeded its short-term 1.0 pound of SO₂ per million British thermal units (mmBtu) BACT, 3-hour average emission limit, for a total of 152 hours. The number of hours B006 was in exceedance of the applicable limit, per quarter, is provided in Table 3, below.

Table 3: Hours in Violation of Sulfur Dioxide Limit for Boiler B006:

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2007				34
2008	0	7	6	21
2009	16	5	24	0
2010	18	21		

VIOLATIONS

32. Duke Energy violated and continues to violate 40 C.F.R. 52.21(r)(1) by not constructing and operating the main boiler at the Zimmer Station in accordance with its March 1986 PSD permit application.

33. Duke Energy violated and continues to violate PSD permit PTI 14-1036, OAC 3745-17-07(A)(1)(a) of the Ohio SIP, NSPS Subpart Da, and Db, and Title V Permit No. 14-13-09-0154 by exceeding twenty percent opacity, as a six-minute average, as described paragraphs 26 through 30, above.

34. Duke Energy violated and continues to violate NSPS Subpart Da, specifically 40 C.F.R. Part 60.11(d) of the General Provisions, by failing to maintain and operate its air pollution control equipment on Boiler B006 in a manner consistent with good air pollution control practice for minimizing emissions.

35. Duke Energy violated and continues to violate PSD permit PTI 14-1036, Title V Permit No. 14-13-09-0154, and OAC Rule 3745-31 of the Ohio SIP by exceeding the 1.0 lbs/mmBtu BACT limit as stated in Paragraph 31, above.

ENFORCEMENT AUTHORITY

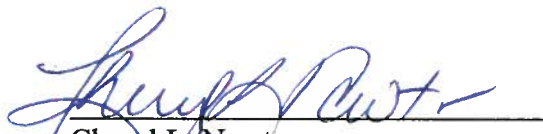
36. Sections 113(a)(1) and (3) of the Act, 42 U.S.C. §§ 7413(a)(1) and (3), provide that the Administrator may issue an administrative penalty order pursuant to Section 113(d), 42 U.S.C. § 7413(d), or bring a civil action pursuant to Section 113(b), 42 U.S.C. § 7413(b), for injunctive relief and/or civil penalties whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of, *inter alia*, the PSD requirements of Section 165(a) of the Act, 42 U.S.C. § 7475(a); Title V of the Act, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued there under; or the PSD provisions of the Ohio SIP. *See also* 40 C.F.R. § 52.23.

37. Section 113(b) of the Act, 42 U.S.C. § 7413(b), authorizes the Administrator to initiate a judicial enforcement action for a permanent or temporary injunction, and/or for a civil penalty of up to \$25,000 per day for each violation occurring on or before January 30, 1997; up to \$27,500 per day for each such violation occurring on or after January 31, 1997 and up to and including March 15, 2004; up to \$32,500 per day for each such violation occurring on or after March 16, 2004 through January 12, 2009; and up to \$37,500 per day for each such violation occurring on or after January 13, 2009, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, 40 C.F.R. § 19.4, and 74 Fed. Reg. 626 (Jan. 7, 2009) against any person whenever such person has violated, or is in violation of, *inter alia*, the requirements or prohibitions described in the preceding paragraph.

38. Section 167 of the Act, 42 U.S.C. § 7477, authorizes the Administrator to initiate an action for injunctive relief, as necessary to prevent the construction, modification or operation of a major emitting facility which does not conform to the PSD requirements in Part C of the Act.

Dated

11/4/10


Cheryl L. Newton
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Betty Williams, certify that I sent a Notice of Violation and Finding of Violation by

Certified Mail, Return Receipt Requested, to:

Joseph A. Miller, Jr., General Manager
Duke Energy Corporation
W.H. Zimmer Generating Station
1781 U.S. Route 52
Moscow, Ohio 45153-9705

I also certify that I sent a copy of the Notice of Violation and Finding of Violation by First


Class Mail to:

Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43215

Brad Miller, Supervisor
Permits and Enforcement Section
Hamilton County Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio, 45219-2660

Robert Brubaker
Porter Wright
41 South High Street
Suites 2800 - 3200
Columbus, OH 43215-6194

on the 4th day of November 2010.


Betty Williams
Administrative Program Assistant
AECAS/AECAB

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